

## EVIDENCE-BASED PRACTICE KNOWLEDGE AND IMPLEMENTATIONS AMONG NURSES AT HO CHI MINH ONCOLOGICAL HOSPITAL IN 2022

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### ABSTRACT

**Objective:** To determine the correlation between knowledge and implementation of evidence-based practice among nurses at Ho Chi Minh City Oncology Hospital. **Subjects and research methods:** A cross-sectional descriptive study was conducted on 194 nurses working at Ho Chi Minh City Oncology Hospital from January 2022 to May 2022. Data were collected using a questionnaire. The research subjects were selected by stratified random sampling method. Descriptive statistics and Pearson correlation were used to analyze the data. **Results:** The majority of nurses participating in the study were female (83%). The mean age of nurses was  $34.46 \pm 6.6$  years. The mean of work experience is  $11.77 \pm 6.47$  years. The highest mean score of knowledge was  $5.12 \pm 0.74$ , followed by practice at  $4.90 \pm 0.99$ . There is a strong correlation between knowledge and implementation of evidence-based practice  $r = 0.64$ ,  $p < 0.05$ . **Conclusion:** These nurses were knowledgeable, active participants in evidence-based practice. Furthermore, there was a correlation between knowledge and evidence-based practice. Therefore, it is necessary to have solutions to provide or facilitate nurses to improve their knowledge of evidence-based practice, such as opening evidence-based practice courses for nurses and encouraging nurses to seek certifications in the field of evidence-based practice. authentication to apply in patient care.

**Keywords:** Knowledge, evidence-based practice, nurse.

### 1. INTRODUCTION

The evidence-based practice (EBP) of nursing is a combination of three factors: care decisions based on the best current research evidence available, along with the clinical expertise of nursing care, while combining the needs and suitability of the patient [1]. David Sackett states that EBP is the best blend of scientific evidence with clinical experience, and the needs and realities of the patient [2]. Moreover, EBP has become a major concern of healthcare workers [3]. Heneghan's Statement on EBP (2017) identifies patient cooperation

in providing evidence as one of the key ways to develop more reliable evidence [4]. EBP also provides the opportunity for more personalized, efficient, and affordable nursing care, while maximizing the effectiveness of clinical diagnosis [5]. Evidence-based nursing is the use of the latest and best available science-based healthcare practices to reduce complications in care and avoid unforeseen medical problems [6, 7].

Several studies around the world showed that most of the participants reported low EBP knowledge or skills and

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implementations [8]. Another study by Hasheesh reported moderate knowledge of EBP among nurses [9]. In contrast to Jane's study, the knowledge and practice of EBP are relatively good [10]. In Vietnam, although there are not many studies on EBP, it also showed that nurses' knowledge and skills of EBP are at an average level [11].

The implementation of EBP is critical to improving the quality of healthcare, professional development, and cost-effective health services [12]. In addition, EBP is one of the key elements of nursing professional accountability. Health care requires integrating theoretical knowledge and the best available evidence, tailoring care to the specifics of a particular case and the realities of the clinical setting [13]. Stemming from the importance of practicing evidence-based patient care, and at the same time with the desire to find connections between nursing knowledge and evidence-based practice, we have conducted a study to investigate "EBP knowledge and implementations among nurses at Ho Chi Minh Oncological hospital in 2022" with the objective "*To determine the correlation between knowledge and implementations of evidence-based practice among nurses at Ho Chi Minh City Oncology Hospital*". The study provided information to evaluate the nursing practice implementations and nursing care techniques at the Ho Chi Minh City Oncology Hospital.

## 2. RESEARCH SUBJECTS AND METHODS

### 2.1. Research subjects

Nurses are working in Clinical Departments, at Ho Chi Minh Oncology Hospital.

\* Inclusion criteria:

- + Nurses directly take care of patients
- + Working experience of 1 year or more.
- + The nurse agrees to participate.

\* Exclusion criteria:

- + Nurses were absent at the time of the study such as sick leave, maternity leave, and study.

### 2.2. Setting

The study was conducted in 15 clinical departments of Ho Chi Minh City Oncology Hospital.

### 2.3. Methods

Design: a descriptive cross-sectional study.

Sample size: using the formula for calculating sample size according to Krejcie and Morgan (1970) [14], as follows:

$$n = \frac{X^2 * N * P(1-P)}{(MX^2 * (N-1)) + (X^2 * P(1-P))}$$

+ n: required sample size.

+ X<sup>2</sup>: Chi-squared value corresponding to confidence and degree of freedom of

+ N: the number of the study population was 325 nurses.

+ ME (Margin of Error) sampling error, in this case, was 5%.

So, Krejcie and Morgan's formula suggests a sample size of .

$$\frac{1.96^2 * 325 * 0.5(1-0.5)}{(1.96^2 * (325-1)) + (1.96^2 * 0.5(1-0.5))} = 176$$

The minimum sample size for conducting the study was 176 nurses. The team increased the sample size by 10%. Therefore, the sample size for the study was 194 nurses.

Sampling method: The research subjects were selected by stratified random sampling method.

#### 2.4. Research instrument

Data were collected using a self-determination questionnaire. The questionnaire was divided into two parts. The first part is a demographic part consisting of 6 items, and the second part is the Vietnamese version EBP scale which was developed by Penny Upton et. al. [15]. The EBP scale consisted of 20 items and was divided into two parts: knowledge (14 items) and implementation (6 items). All items were scored on a 7-point Likert scale (1-7), the higher the score the higher the knowledge and implementation of EBP. The responses of each item are considered positive if the score is greater than 4 [15].

A pilot study was conducted on 30 nurses. The coefficient of Cronbach's Alpha of the questionnaire was 0.92 (implementation) and 0.91 (knowledge).

#### 2.5. Data collection

The data collection process was carried out after the research protocol was approved by the Ethics Committee in Biomedical

Research of the Ho Chi Minh Oncology Hospital. Representatives of the research team went to clinical departments and access to nurses. After that, the research subjects were given the questionnaire and explained the research purpose, research process, and information confidentiality when participating in the study. The time to complete the questionnaire was 20 minutes. Finally, when a sufficient number of samples have been collected, synthesize and analyze the obtained data.

#### 2.6. Data Analysis

Data after the collection was cleaned and entered into SPSS 16 software. Descriptive statistics including frequency, percentage, mean and standard deviation were used to analyze the demography of the subjects; knowledge, and implementation of EBP. Pearson's test was used to identify the relationship between knowledge and implementation of EBP.

#### 2.7. Ethical considerations

The research protocol was approved by the Ethics Committee in Biomedical Research of the Ho Chi Minh Oncology Hospital at Decision No. 293A dated October 13, 2021

### 3. RESULT

After analyzing the data collected from 194 nurses, the results were as follows

#### 3.1. Information on subjects participating in the study

**Table 1. Demographic characteristics of the subjects (n = 194)**

Items	Mean	Standard deviation	Frequency	%
<b>Gender</b>				
Male			33	17.0
Female			161	83.0
<b>Age</b>	34.46 Min = 23; Max = 56	6.60		

Items	Mean	Standard deviation	Frequency	%
<b>Marital status</b>				
Single			57	29.4
Married			130	67.0
Divorced/widowed			07	3.6
<b>Number of years of work experience</b>	11.77 Min = 01; Max = 35	6.47		
<b>Highest professional education level</b>				
Under diploma			59	30.4
Diploma			07	3.6
Bachelor			128	66.0

The majority of study participants were female (83%). The mean age was 34.46 years old and ranged from 23 to 56 years old. More than half of the study participants were married (67%). The mean of work experience year was 11.77 years and ranged from 1 to 35 years. Research subjects with bachelor's degrees accounted for the highest percentage (66.0 %).

### 3.2. Knowledge and implementation of EBP of nurses

**Table 2. Knowledge of EBP of nurses (n = 194)**

Items	X ± SD
Research skills	3.71 ± 1.37
IT skills	4.37 ± 1.14
Monitoring and reviewing of practice skills	5.06 ± 0.99
Converting your information needs into a research question	4.20 ± 1.13
Awareness of major information types and sources	5.03 ± 0.99
Ability to identify gaps in your professional practice	5.03 ± 0.95
Knowledge of how to retrieve evidence	5.04 ± 1.04
Ability to analyze critically evidence against set standards	4.69 ± 1.05
Ability to determine how valid (close to the truth) the material	4.58 ± 1.14
Ability to determine how useful (clinically applicable) the material	4.72 ± 1.12
Ability to apply information to individual cases	4.72 ± 1.15
Sharing of ideas and information with colleagues	5.09 ± 1.01
Dissemination of new ideas about care to colleagues	5.08 ± 1.04
Ability to review your practice	5.05 ± 1.01
<b>Total</b>	<b>5.12 ± 0.74</b>

Table 2 showed that nurses' knowledge of EBP was positive and the mean score was  $5.12 \pm 0.74$ . "Research skills" had the lowest score  $3.71 \pm 1.37$  and "Sharing of ideas and information with colleagues" had the highest score  $5.09 \pm 1.01$ .

**Table 3. Implementation of EBP of nurses (n = 194)**

Items	Point ( X $\pm$ SD)
Formulating a answerable question is the beginning of the process of filling this gap	4.89 $\pm$ 1.09
Tracking down the relevant evidence once you have formulated the question	4.76 $\pm$ 1.08
Critically appraised, against set criteria, any literature you have discovered	4.92 $\pm$ 1.17
Integrating the evidence you have found with your expertise	4.86 $\pm$ 1.14
Evaluating the outcomes of your practice	4.96 $\pm$ 1.05
Sharing this information with colleagues	5.03 $\pm$ 1.08
<b>Total</b>	<b>4.90 <math>\pm</math>0.99</b>

Table 3 showed that nurses actively implementation in EBP with a mean score of  $4.90 \pm 0.99$ . The highest mean score was "Sharing this information with colleagues"  $5.03 \pm 1.08$  and the lowest score was "Tracking down the relevant evidence once you have formulated the question"  $4.76 \pm 1.08$ .

### 3.3. Relationship between knowledge and implementation of EBP

**Table 4. Relationship between knowledge and implementation of EBP (n = 194 )**

	Implementation of EBP	
	r	p
<b>Knowledge of EBP</b>	0.64	0.00

The result showed that there was a strong positive correlation between knowledge and implementation of EBP ( $r = 0.64$  ;  $p < 0.05$  ).

## 4. DISCUSSION

The majority of study participants were female (83%). This result was similar to Cable's study showing that women account for 85% [16]. This can be explained because the nursing profession comes from the caring role of mothers and women in the family. Moreover, the research result was consistent with the report on the gender ratio of nurses by region is more female than male [17]. The mean age of nurses was  $34.46 \pm 6.6$  years old. The above results were similar to

studies in Vietnam and the world as studied by Dang Thi Minh Phuong ( $34.78 \pm 7.98$  years old) [18], and Pham Thi Oanh ( $30.05 \pm 9.38$  years old) [11], Jae Yong Yoo ( $31.9 \pm 9.2$  years old) [19], Azime Karakoç-Kumsar ( $36.55 \pm 9.29$  years old) [20] and Ammouri ( $35 \pm 8.25$  years old) [21 ]. However, this result was lower than that of Cable's study ( $42 \pm 12$  years) [16]. In contrast, the results of this study were higher than those of Asrat ( $28.35 \pm 4.5$  years old) [12]. Globally, the nursing workforce is relatively young, but

there are regional disparities, with the age structure being essentially older than in the Americas and Europe regions [17]. The average number of years of work experience was ( $11.77 \pm 6.47$ ) ranging from 1 to 35 years. This result was lower than the study of Cable ( $15 \pm 12$ ) [16] and Brown ( $14.41 \pm 9.82$ ) [20]. This result was consistent with studies in Vietnam, typically the study of Dang Thi Minh Phuong ( $11.6 \pm 8.1$ ) [18]. It can also be understood that in different countries, there will be cultures as well as specific characteristics of each country in the training of nursing human resources.

The nurse's knowledge of EBP had a higher mean score than implementation. Most of the mean scores of the items of the questionnaire are above 4, which indicated that nurses are aware of and interested in the application of EBP in their work. However, in the research of Nguyen Thi Bich Tram, it is said that the application of EBP in nursing care was still passive and the nurses do not understand the concepts related to EBP as well as the nurses do not clearly understand the benefits EBP will bring in the care of patients [22].

Our research has shown that nurses recognize the importance of EBP and the need to apply evidence to care. However, knowledge of "research skills" had the lowest score ( $3.71 \pm 1.37$ ). But few previous studies mentioned that scientific research is part of EBP [4, 23]. Taking steps to carry out research will help nurses gain new, reliable knowledge, and realize the importance of EBP in professional practice. This will help nurses tend to practice EBP more often. Therefore, it is necessary to have appropriate solutions to encourage nurses to actively carry out research projects thereby helping to improve the knowledge and practice of EBP of nurses.

The nursing EBP implementation in this study was assessed as positive. This has been different from the study of Felor [24], Kaseka [25], and Li [26] which suggested that EBP implementation is poor. EBP for nurses is new, and nurses are not aware of doing research related to care. Therefore, our authors recommend that hospital managers create a supportive environment and systematically guide practice strategies for nurses.

In addition, we also found a correlation between knowledge and implementation of EBP. There was a strong and positive correlation between knowledge and implementation of EBP of nurses ( $r = 0.64$ ;  $p < 0.05$ ). This result is similar to the study of Jae Yong Yoo [27], Li [26], Felor [24], and Brown [20]. Understandably, the more knowledgeable nurses are about EBP, the more active they are in applying the evidence to care.

**Limitations of the study:** Although our study showed a correlation between knowledge and implementation of EBP, the results are only representative of cancer nursing care and cancer hospitals. That is why we assume that there may be a difference between nurses in specialized and general hospitals.

## 5. CONCLUSION

Knowledge and implementation of EBP of nurses at Ho Chi Minh City Oncology Hospital were positive. In addition, there was a strong positive correlation between knowledge and implementation of EBP.

Nurses should be encouraged to undertake EBP projects so that good evidence can be used in nursing care. Training courses on EBP for nurses should be organized so that they can find work-related evidence in the practice of care.

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